

1. (original) A method of manufacturing a pattern of a dental prosthesis from a wax material, comprising the steps of

(a) forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) scanning said surfaces of the model to collect three dimensional digital data corresponding to the said surfaces,

(c) displaying on a monitor screen of computer aided design equipment an image of a proposed dental prosthesis based, at least in part, on the collected three dimensional digital data corresponding to said surfaces,

(d) with the aid of said computer aided design equipment, modifying said image so that said image displayed on the monitor screen substantially corresponds to the dental prosthesis to be manufactured,

(e) collecting the three dimensional digital data substantially corresponding to said image of said dental prosthesis to be manufactured and transmitting said three dimensional digital data of said image of said dental prosthesis to be manufactured to automated prototyping equipment,

(f) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data substantially corresponding to said image of said dental prosthesis to be manufactured.

2. (original) The method of Claim 1 where the pattern has marginal edges that are at least 3/4 of a millimeter from margins of an individual tooth structure to which the dental prosthesis is to be attached.

3. (original) The method of Claim 2 where, after step (f), the marginal edges of the pattern are manually adjusted to compensate for the specific configuration of said individual tooth structure by adding wax material to said edges.

4. (original) A method of manufacturing a dental prosthesis, comprising the steps of

(a) forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) scanning said surfaces of the model to collect three dimensional digital data corresponding to the said surfaces,

(c) displaying on a monitor screen of computer aided design equipment an image of a proposed dental prosthesis based, at least in part, on the collected three dimensional digital data corresponding to said surfaces,

(d) with the aid of said computer aided design equipment, modifying said image so that said image displayed on the monitor screen substantially corresponds to the dental prosthesis to be manufactured,

(e) collecting the three dimensional digital data substantially corresponding to said image of said dental prosthesis to be manufactured and transmitting said three dimensional digital data of said image of said dental prosthesis to be manufactured to automated prototyping equipment,

(f) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data substantially corresponding to said image of said dental prosthesis to be manufactured, and

(g) using said pattern in the lost wax investment casting process manufacturing said dental prosthesis.

5. (original) The method of Claim 4 where the pattern has marginal edges that are at least 3/4 of a millimeter from margins of an individual tooth structure to which the dental prosthesis is to be attached.

6. (original) The method of Claim 5 including, after step (f) and prior to step (g), manually adjusting the marginal edges of the pattern to compensate for the specific configuration of said individual tooth structure by adding wax material to said edges.

7. (original) A method of manufacturing a pattern of a dental prosthesis from a wax material, comprising the steps of

(a) forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) creating three dimensional digital data corresponding to the said surfaces, and based on said data corresponding to the said surfaces, creating three dimensional digital data substantially corresponding to the dental prosthesis to be manufactured,

(c) transmitting said three dimensional digital data of said dental prosthesis to be manufactured to automated prototyping equipment, and

(d) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data of said dental prosthesis.

8. (original) The method of Claim 7 where the pattern has marginal edges that are at least 3/4 of a millimeter from margins of an individual tooth structure to which the dental prosthesis is to be attached.

9. (original) The method of Claim 8 where, after step (d), the marginal edges of the pattern are manually adjusted to compensate for the specific configuration of said individual tooth structure by adding wax material to said edges.

10. (original) A method of manufacturing a dental prosthesis, comprising the steps of

(a) forming a model of a patient's bite registration including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) creating three dimensional digital data corresponding to the said surfaces, and based on said data corresponding to the said surfaces, creating three dimensional digital data substantially corresponding to the dental prosthesis to be manufactured,

(c) transmitting said three dimensional digital data of said dental prosthesis to be manufactured to automated prototyping equipment,

(d) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data of said dental prosthesis, and

(e) using said pattern in the loss wax investment casting process manufacturing said dental prosthesis.

11. (original) The method of Claim 10 where the pattern has marginal edges that are at least 3/4 of a millimeter from margins of an individual tooth structure to which the dental prosthesis is to be attached.

12. (original) The method of Claim 11 including, after step (d) and prior to step (e), manually adjusting the marginal edges of the pattern to compensate for the specific configuration of said individual tooth structure by adding wax material to said edges.

13. (re-presented in independent form) The pattern of a dental prosthesis made from a wax material in accordance with ~~the method of Claim 7 a~~ method of manufacturing, comprising the steps of

(a) forming a model of a patient's dentition including surfaces corresponding to the dental structure nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) creating three dimensional digital data corresponding to the said surfaces, and based on said data corresponding to the said surfaces, creating three dimensional digital data substantially corresponding to the dental prosthesis to be manufactured,

(c) transmitting said three dimensional digital data of said dental prosthesis to be manufactured to automated prototyping equipment, and

(d) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data of said dental prosthesis.

14 (re-presented in independent form) The dental prosthesis made in accordance with ~~the method of Claim 10 a method of manufacturing,~~ comprising the steps of

(a) forming a model of a patient's bite registration including surfaces corresponding to the dental structure

nearby the location that the dental prosthesis is to be placed in the mouth of a patient,

(b) creating three dimensional digital data corresponding to the said surfaces, and based on said data corresponding to the said surfaces, creating three dimensional digital data substantially corresponding to the dental prosthesis to be manufactured,

(c) transmitting said three dimensional digital data of said dental prosthesis to be manufactured to automated prototyping equipment,

(d) using the automated prototyping equipment making from a wax material the pattern of said dental prosthesis to be manufactured based upon said three dimensional digital data of said dental prosthesis, and

(e) using said pattern in the loss wax investment casting process manufacturing said dental prosthesis.